

## REMARKS

Favorable reconsideration of this application is respectfully requested in view of the following remarks.

Appreciation is expressed to Examiner King for withdrawing the finality of the previous Official Action.

The paragraph near the bottom portion of page 23 of the specification and the paragraph bridging pages 23 and 24 of the specification have been amended to correct a typographical error by changing the term "selectro" to --select-low--.

Page two of the Official Action notes that the wording in Claims 3, 4 and 7 is not consistent with the description in the application. Also, page three of the Official Action comments that the language in the claims concerning the predetermined value do not make clear whether the claimed predetermined values are the same or different from one another.

To address these points, Claims 3-7 have been amended for purposes of consistency with the description in the specification. Thus, Claims 3 and 5 now recite that when a variation between the road surface  $\mu$  slope of the front wheel and the road surface  $\mu$  slope of the rear wheel is greater than a first predetermined value (e.g., C2 in Fig. 3) the control means increases the braking torque of the rear wheel, and when the variation is less than a second predetermined value (e.g., C1) the control means reduces the braking torque of the rear wheel.

Claim 6 now recites that when a variation between the road surface  $\mu$  slope of the turning inner side wheel and the road surface  $\mu$  slope of the turning outer side wheel is greater than a first predetermined value the control means increases the braking torque of the turning outer side wheel, and when the variation is less than a

second predetermined value the control means reduces the braking torque of the turning outer side wheel.

As amended, Claim 7 recites that when a variation between the road surface  $\mu$  slope of the turning outer side wheel and the road surface  $\mu$  slope of the turning inner side wheel is greater than a first predetermined value the control means increases the braking torque of the turning inner side wheel, and when the variation is less than a second predetermined value the control means reduces the braking torque of the turning inner side wheel.

In light of the amendments to Claims 3, 4 and 7, withdrawal of the claim rejections based on the first and second paragraphs of 35 U.S.C. § 112 is respectfully requested.

The only other issue raised in the Official Action involves the rejection of Claims 2, 5, 6 and 8 based on the disclosure contained in European Application Publication No. 0 825 080 to *Ono et al.* That rejection is respectfully traversed for at least the following reasons.

As discussed in earlier responses, the claims in this application are directed to a braking force distribution control device. As set forth in independent Claim 2, the claimed control device comprises wheel speed detecting means for detecting wheel speeds of respective vehicle wheels, and road surface  $\mu$  slope estimating means for estimating for the respective wheels, on the basis of the detected wheel speeds, slopes of a coefficient of friction  $\mu$  between the wheels and the road surface as road surface  $\mu$  slopes. The braking force distribution control device also comprises control means for, on the basis of the road surface  $\mu$  slopes estimated for the respective wheels by the road surface  $\mu$  slope estimating means, distributing braking

forces to the respective wheels by controlling the braking force of each wheel. On the basis of the detected wheel speeds, the road surface  $\mu$  slope estimating means estimates slopes of braking forces with respect to wheel slip speeds as the road surface  $\mu$  slopes for the respective wheels, and the control means controls the braking torque of a wheel which is an object of control on the basis of the road surface  $\mu$  slope of the wheel which is an object of control and the road surface  $\mu$  slope of a reference wheel among the road surface  $\mu$  slopes estimated by the road surface  $\mu$  slope estimating means.

*Ono et al.* discloses an anti-lock braking system. The Official Action specifically refers to the embodiment of the braking system represented by the operational flow chart shown in Fig. 42. As discussed beginning on page 43 of *Ono et al.*, this version of the braking system initially determines in step 400 whether or not the ABS starting conditions have been established. This is determined based on depression of the brake pedal and a determination that the wheel deceleration is smaller than a predetermined negative value. After changing over to the ABS mode, the system calculates in step 404 the absolute value of the difference  $\Delta\mu$  in friction coefficient  $\mu$  between the left-side road portion and the right-side road surface portion, or the difference between the physical quantities associated with the friction coefficient  $\mu$ . Then the system determines in step 406 whether this absolute value of the difference  $\Delta\mu$  in friction coefficient is greater than a reference value G. If the absolute value of this difference, or the physical quantity associated with the friction coefficient  $\mu$ , is greater than the reference value G, ABS control is carried out by exciting the braking force applied to the front wheel on the road portion having the lower friction coefficient  $\mu$ . The braking force is excited in a very small amount

through output of a micro excitation instruction signal. The wheel speeds of the rear wheels are then controlled to follow the wheel speeds of the front wheels. On the other hand, if the difference in friction coefficient  $\mu$  between the left-side road portion and the right-side road portion, or the physical quantity associated with the friction coefficient  $\mu$ , is smaller than the reference value G, ABS control is carried out by exciting in a very small amount the braking forces acting on the front wheels, with the wheel speeds of the rear wheels once again being controlled to follow the wheel speeds of the front wheels.

One of the differences between the claimed braking force distribution control device recited in independent Claim 2 and the disclosure in *Uno et al.* is that the claimed braking force distribution control device comprises road surface  $\mu$  slope estimating means for, on the basis of the detected wheel speeds, estimating for the respective wheels slopes of a coefficient of friction  $\mu$  between the wheels and a road surface as road surface  $\mu$  slopes. *Uno* is not at all concerned with estimating slopes of a coefficient of friction  $\mu$  between the wheels and a road surface as road surface  $\mu$  slopes. Rather, *Uno et al.* describes determining the difference between the friction coefficient  $\mu$  of the left-side road surface portion and the friction coefficient  $\mu$  of the right-side road surface portion. Thus, *Uno et al.* cannot be said to anticipate Claim 2 as it does not disclose a road surface  $\mu$  slope estimating means similar to that set forth in independent Claim 2. It necessarily follows that *Uno et al.* also does not disclose a control means similar to that recited in Claim 2 which, on the basis of the road surface  $\mu$  slopes estimated for the respective wheels by the road surface  $\mu$  slope estimating means, distributes braking forces to the respective wheels by controlling the braking force of each wheel.

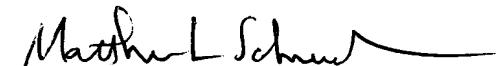
For at least the reasons set forth above, the claimed braking force control system recited in independent Claim 2, as well as dependent Claims 3-8, is patentably distinguishable over the disclosure contained in *Uno et al.* Accordingly, withdrawal of the rejection of record and allowance of this application are earnestly solicited.

Should any questions arise in connection with this application, or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application, the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

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